

Section 2-2: Order of Operations

By the end of this lesson, you should be able to answer:

- How do you evaluate numerical expressions using order of operations?

Where you might see this in the real world:

- Part-time job, fitness, entertainment, population

Define the following terms:

1. Numerical expression
2. Value
3. Simplify
4. Exponent
5. Variable expression
6. Evaluate

We have all seen the order of operations before. There is an expression we use to remember it:

Example 1: Simplify each numerical expression.

a. $12 + (3 \cdot 4)$

b. $16 - (5 \cdot |2|)$

c. $-5 \cdot 4^2 - (-3)$

d. $-(10 - 8)^2 - 2^3$

Example 2: Evaluate each variable expression for $k = \frac{2}{3}$.

a. $\frac{1}{2}k^2$

b. $\frac{1}{3}k - k^2$

Extra Credit Challenge: Demonstrate that using only the number 2 and parentheses, exponents, the order of operations, and the zero power ($b^0 = 1$), you can write expressions equal to each of the whole numbers from 1 through 10. I'll get you started: $2^0 = 1$

Problem Set:

“Do what you love, love what you do, leave the world a better place and don't pick your nose.” - Jeff Mallett